

[DOCUMENT NAME] SPECIFICATION

[TITLE OF THE INVENTION]

Optical Switching Device and Optical Transmission System

[CLAIMS]

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[Claim 1] An optical switching device comprising a plurality of input/output ports for inputting/outputting optical signals, and switching means for switching between input/output optical paths of the input/output ports;

said switching means having;

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an optical member for reflecting an optical signal inputted from any of the plurality of input/output ports toward another of the input/output ports;

a first driving means for driving said optical member so as to switch between input/output optical paths of the input/output ports; and

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a second driving means for driving said optical member so as to displace between a position to reflect the optical signal in a direction toward the input/output port and a position to reflect the optical signal in a direction deviated from the direction toward the input/output port.

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[Claim 2] An optical switching device according to claim 1, further comprising an optical demultiplexer device for demultiplexing a wavelength division multiplexing optical signal into individual wavelengths;

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wherein the switching means has a plurality of optical members corresponding to respective signal light components



demultiplexed into the individual wavelengths.

[Claim 3] An optical switching device according to claims 1 or 2,

wherein said optical member is provided inclinably on a cantilever supported by a base substance;

wherein said first driving means tilts said optical member with respect to said cantilever; and

wherein said second driving means displaces said optical member in a direction different from the tilting direction of said optical member.

[Claim 4] An optical switching device according to claim 3,

wherein said first driving means has a first electrode provided on said base substance and a first voltage source to apply a voltage to said first electrode; and

wherein said second driving means has a second electrode provided on said base substance and a second voltage source to apply a voltage to said second electrode.

[Claim 5] An optical switching device comprising a plurality of input/output ports for inputting/outputting optical signals, and switching means for switching between input/output optical paths of the input/output ports;

wherein the switching means switches between the input/output optical paths of the input/output ports so as to keep an optical signal led to any of the plurality of input/output ports from traversing other input/output ports.